

## Review of HDF5 / HDF-EOS5 specifications

NASA's Earth Science Data Systems Standards Process Group (SPG) is considering the Hierarchical Data Format Version 5 (HDF5) and the Hierarchical Data Format – Earth Observing System (HDF-EOS5) specifications, for adoption as community standards.

You are invited to review these two Requests For Comment (RFC's) in the context of your implementation experience with either or both of these data format specifications, using the review questions below. Due to the fact that the HDF-EOS5 specification is a profile of the HDF5 specification, the SPG are referencing both specifications in a single review request. Users are requested to review the RFC that they are most familiar with. It is however expected that some users may wish to review both RFC's. If you are able to review both RFC's, please provide a separate response for each.

Please send comments before May 26, 2006 to [spg-rfc-007@lists.nasa.gov](mailto:spg-rfc-007@lists.nasa.gov).

0. Please indicate which RFC this response applies to:  
    \_\_\_ ESE-RFC-007          HDF5  
    \_\_\_ ESE-RFC-008          HDF-EOS5
1. (*Your background*) Describe in a sentence or two your overall implementation experience related to the proposed specification. (*e.g., specification implementer, tools developer, data provider, scientific analyst, science user, etc.*) Have you directly implemented or modified an HDF5 or HDF-EOS5 library using the specification? Did you use pre-existing software, and if so, what did you use?
2. (*Compatibility*) The latest versions of the HDF and associated HDF-EOS specifications were submitted to the standards process; these are HDF5 and HDF-EOS5. HDF5 represents a significant departure from previous versions of HDF. HDF-EOS5 supports HDF5, but maintains the previous HDF-EOS interface to the extent possible. What version(s) of the specification(s) have you evaluated or are you using now? If you are not using the latest version(s), why not?
3. (*Completeness*) Does the specification provide all the detail you need to implement it in software? (*e.g., to read or write a data file; to implement the library, a profile or extension; or develop a tool such as a format translator*) If not, describe what is missing in the specification.
4. (*Accuracy*) Do any parts of the specification contain inaccuracies, or internal inconsistencies? If so, please provide details.
5. (*Clarity*) Is any part of the specification ambiguous, or poorly explained? If so, please provide details.
6. (*Balance*) Does the standard describe the right set of concepts, behavior, data types, and data operations for its intended users? An overly broad set (requiring excessive complexity)? A narrowly simplistic set?
7. (*Usefulness*) How well does this specification meet your information sharing needs? (*e.g., does it work well with the data types and data manipulations in your application? Does it properly represent your datasets? What are the pros and cons of this data format?*)
8. (*Implementation*) What implementation challenges does the proposed standard present? (*e.g., does it require advanced processing power, large amounts of memory, complex configuration, etc.? Does it scale to a production environment?*)
9. (*Flexibility*) Into what software environment(s) have you integrated HDF5 or HDF-EOS5 (*e.g., Solaris, Linux, Windows, Mac OS X*)? Have you implemented, tested or deployed HDF5 or HDF-EOS5 packages other than those provided by the original HDF5 and HDF-EOS5 developers?